

ABB BALDOR RELIANCE III

Customer information packet

SUM72004SM-4

20HP, 1750RPM, 3PH, 60HZ, 210TY, XPNV, V1

Class - CLI GP C,D

Division - Not Applicable

Specifications

Enclosure	XPNV
Frame	210TY
Frame Material	Iron
Frequency	60.00 Hz
Haz Area Class and Group	CLI GP C,D
Haz Area Division	Not Applicable
Motor Letter Type	Three Phase
Phase	3
Agency Approvals	CCSA US
Base Indicator	Rigid
Bearing Grease Type	Polyrex EM (-20F +300F)
Cable Length	25 FOOT
Design Code	B
Drip Cover	No Drip Cover
Duty Rating	CONT
Haz Area Temp Code	T3C
Heater Indicator	No Heater
Insulation Class	F
Inverter Code	Not Inverter
IP Rating	IP68
KVA Code	H
Lifting Lugs	Standard Lifting Lugs
Motor Standards	NEMA
Motor Type	M
Mounting Arrangement	V1
Number of Poles	4
Product Family	Pump - Centrifugal
Pulley End Bearing Type	Ball
Pulley Face Code	Standard
Service Factor	1.15
Shaft Diameter	1.250 IN
Shaft Rotation	Reversible

Part Detail

Revision	B
Type	AC
Mech. spec.	
Base	
Status	PRD/A
Elec. spec.	78234
Layout	619738-018
Eff. date	12-16-2024
CD Diagram	
Poles	///
Leads	
Proprietary	False
Created date	07-12-2024

Shaft Slinger Indicator	No Slinger
Speed Code	Single Speed
Starting Method	Direct on line
Thermal Device - Winding	Normally Closed Thermostat

Nameplate

000613007MS											
CAT.NO.	SUM72004SM-4			SPEC NO.		S21-CWS0-0306					
SER.NO.					FRAME SIZE		210TY				
CONSTANT HP RPM	HP	RPM	VOLTS		AMPS		HZ		S.F.		
	20	1750	230/460		54.2/27.09		6-60		1.00		
	20	1750	230/460		54.2/27.09		60		1.15		
			@		HZ	CODE	H				
	TYPE	P	INSUL.CLASS		F	TORQUE		10:1_VT		DESIGN	A
	D.E. BRG.	60BC02JPP30A			ENCL	TENV		DUTY	15 MIN		PH
O.D.E. BRG.	30BC02JPG30A			MOTOR WEIGHT					AMB	40	
FINAL CONN VOLTAGE = 460 *15											
MIN IN AIR ;SUB. IN SEWAGE /											
WATER ONLY											

000613007RC			
CLASS I GROUP	C D X	NO.	
CLASS II GROUP	X X X		
OPERATING TEMP CODE	T3C		

000692000MB	
SUITABLE FOR OPERATION ON PWM	
INVERTER EQUIPPED WITH IGBT	
DEVICES AND CAPABLE OF	
CARRIER	
FREQUENCY OF 2 KHZ MINIMUM	

000613007MS

CAT.NO.	SUM72004SM-4		SPEC NO.		S21-CWS0-0306						
SER.NO.				FRAME SIZE		210TY					
	HP	RPM	VOLTS		AMPS		HZ	S.F.			
	20	1750	230/460		54.2/27.09		6-60	1.00			
	20	1750	230/460		54.2/27.09		60	1.15			
CONSTANT HP RPM			@		HZ	CODE	H				
TYPE	P	INSUL.CLASS		F	TORQUE		10:1_VT		DESIGN	A	
D.E. BRG.	60BC02JPP30A			ENCL	TENV		DUTY	15 MIN		PH	3
O.D.E. BRG.	30BC02JPG30A			MOTOR WEIGHT					AMB	40	
FINAL CONN VOLTAGE = 460 *15											
MIN IN AIR ;SUB. IN SEWAGE /											
WATER ONLY											

AC induction motor performance data

Record #78234 - Typical performance - not guaranteed values

Winding	07WGA0004
Type	0750M
Enclosure	XPNV

Nameplate data

Rated Output	20		
Volts	230/460		
Full Load Amps	54.2/27.1		
R.P.M.	1750		
Hz	60	Phase	3
KVA Code	H		
S.F.	1.15		
NEMA Nom. Eff.	91	Power Factor	76
Duty	15 MIN		
S.F. Amps			

460 V, 60 Hz:

High Voltage Connection

Full Load Torque	59.8 LB-FT
Start Configuration	direct on line
Breakdown Torque	147 LB-FT
Pull-up Torque	95.75 LB-FT
Locked-rotor Torque	106 LB-FT
Starting Current	168 A
No-load Current	13.63
Line-line Res. @ 25°C	0.614 Ω
Temp. Rise @ Rated Load	40°C
Temp. Rise @ S.F. Load	52°C
Locked-rotor Power Factor	38
Rotor inertia	1.23 lb-ft ²

Load Characteristics 460 V, 60 Hz, 20 HP

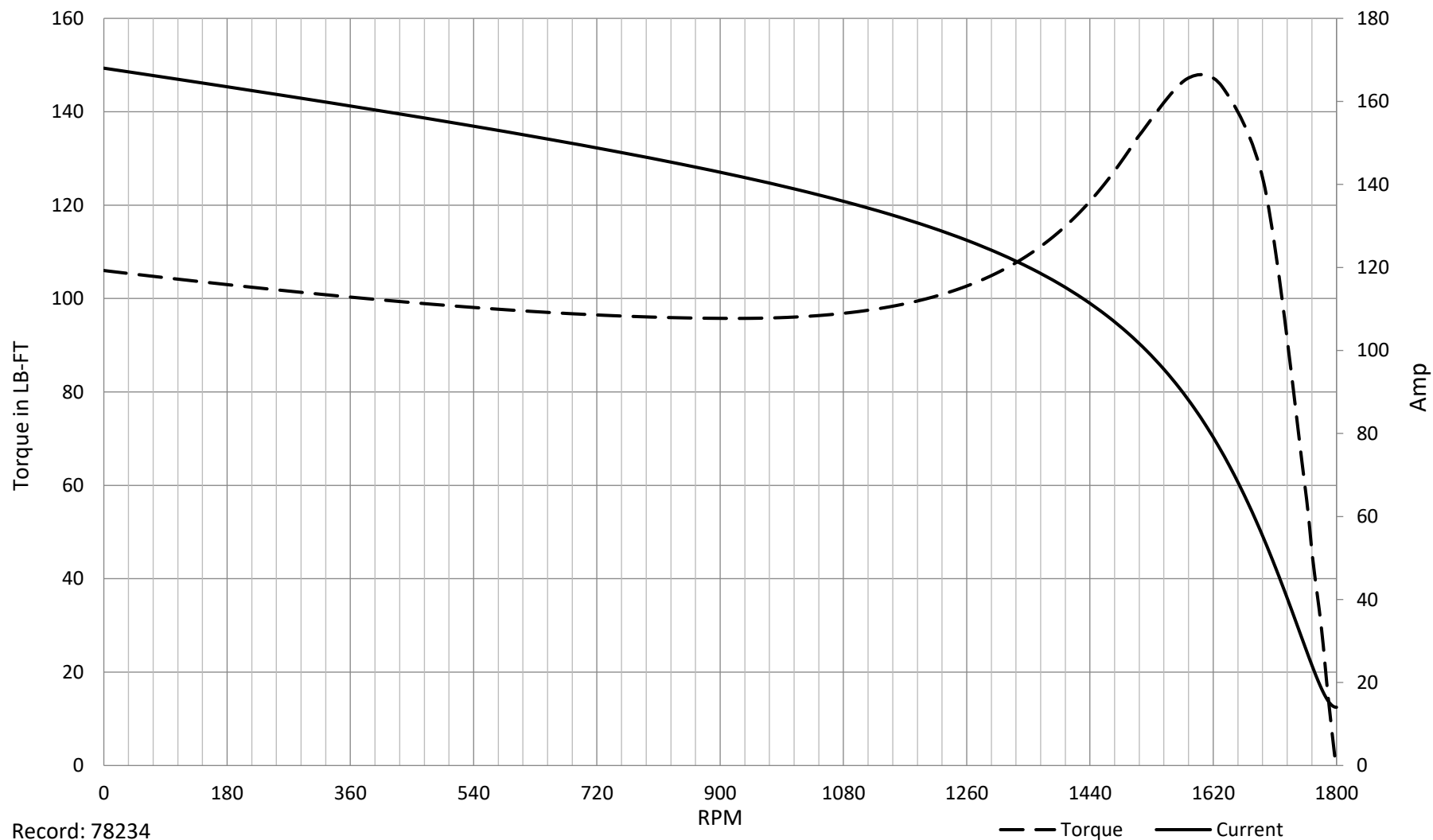
% of Rated Load	NL	25	50	75	100	125	150	SF
Power Factor	3	35	57	69	76	79	80	78
Efficiency	0	89.3	92.5	92.1	91.2	89.5	88.2	90.2
Speed	1799	1788	1778	1765	1754	1738	1724	1744
Line amperes	13.63	14.74	17.69	21.99	27.09	33.1	39.7	30.7

SPEED TORQUE / SPEED CURRENT CURVES

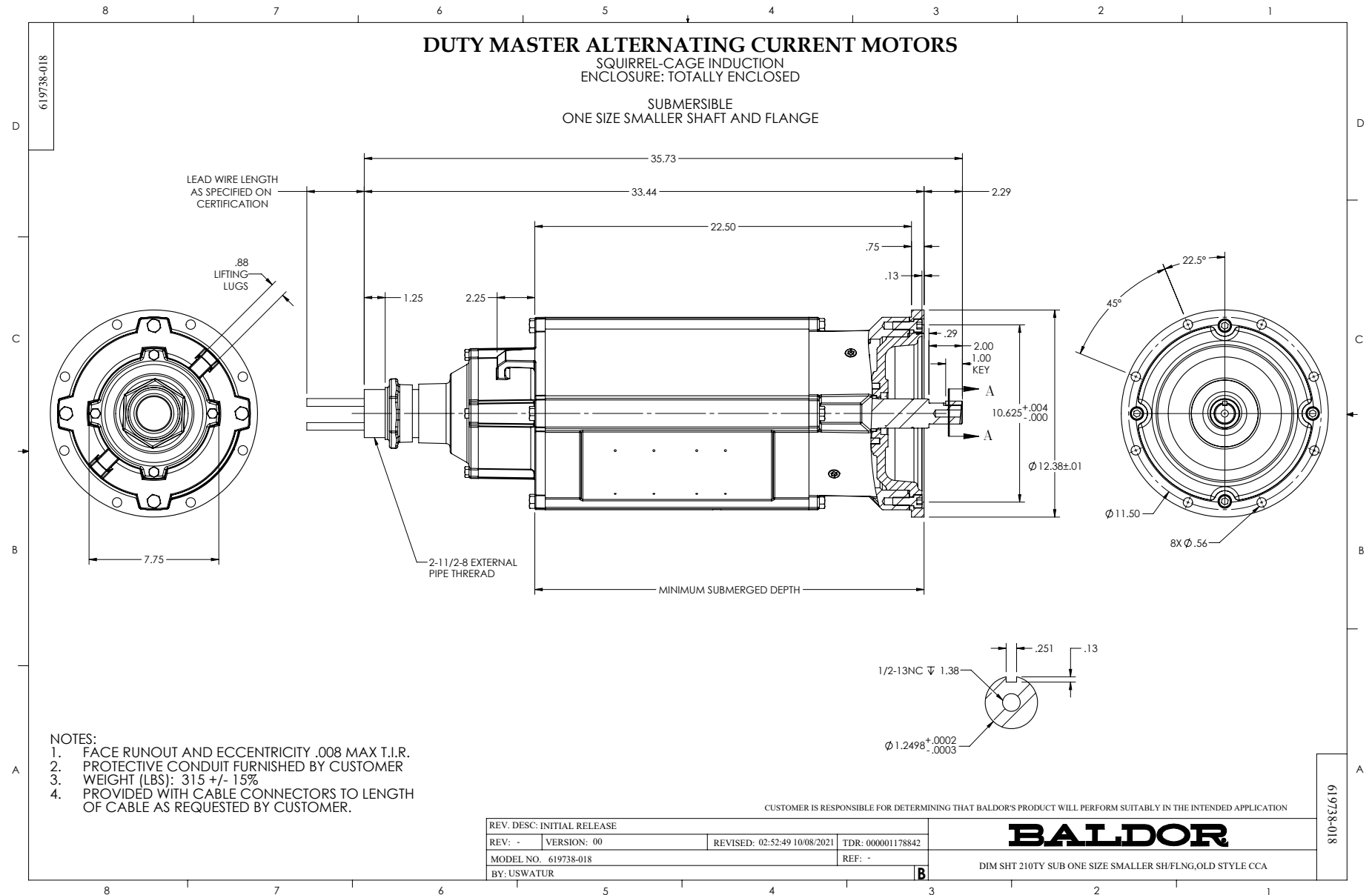
BALDOR • RELIANCE

07WGA0004

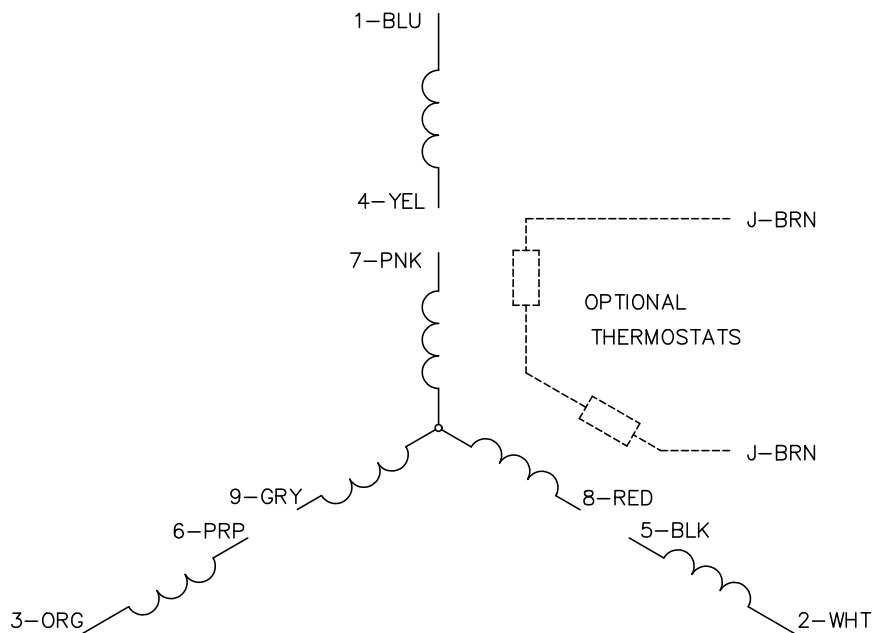
20HP 460V 60HZ



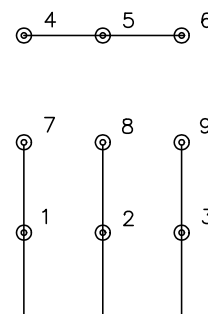
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CD0005

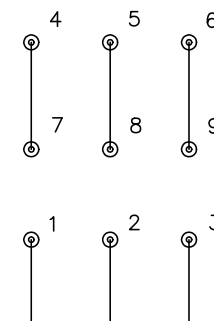


LOW VOLTAGE
(2Y)



LINE

HIGH VOLTAGE
(1Y)



LINE

NOTES:

1. INTERCHANGE ANY TWO LINE LEADS TO REVERSE ROTATION.
2. OPTIONAL THERMOSTATS ARE PROVIDED WHEN SPECIFIED.
3. ACTUAL NUMBER OF INTERNAL PARALLEL CIRCUITS MAY BE A MULTIPLE OF THOSE SHOWN ABOVE.
4. LEAD COLORS ARE OPTIONAL. LEADS MUST ALWAYS BE NUMBERED AS SHOWN.

REV. DESC: REVISE TO SHOW OPTIONAL COLORS

REV. LTR: E

BY: JLP

REVISED: 01/19/99 10:15

TDR: 0171435

900000

FILE: AAA00005140

MDL: -

MTL: -

BALDOR ELECTRIC Co.

3PH, DV, 9 LEADS

CD0005